IN THE CLAIMS:

1. (currently amended) A processing base unit that interfaces with a fluid-processing cartridge for extracorporeal blood processing, the base unit comprising:

a blood processing mechanism;

a heat exchange surface; and

a cartridge interface configured to interface with the fluid-processing cartridge so that when the fluid-processing cartridge is installed, the cartridge interface (a) actuates the fluid-processing cartridge such that the fluid-processing cartridge processes a fluid and (b) holds the fluid-processing cartridge in a position that keeps the heat exchange surface in thermal contact with the fluid,

an engagement mechanism with an actuation member ~~wherein the cartridge interface is~~ configured so that (a) portions of the cartridge interface that drive the fluid-processing cartridge and (b) portions of the cartridge interface that ~~keeps~~ keep the heat exchange surface in thermal contact with the fluid ~~are both~~ may be engaged in response to ~~a single~~ operator movement of the actuation member ~~action~~.

2-21 (canceled)

22. (currently amended) A processing base unit that interfaces with a fluid-processing cartridge for extracorporeal blood processing, the base unit comprising:

a blood processing ~~unit~~ mechanism with a generally planar cartridge interface panel having actuators and sensors configured to engage corresponding elements of the fluid-processing cartridge;

a heat generator with a heat transfer surface that is aligned with the interface panel when the base unit is in a closed position;

a closing mechanism with a user operable latch that presses the heat generator against, and ~~the~~ engages the interface panel with, ~~against~~ the cartridge by means of a single mechanical action of the latch.

23. (previously presented) The base unit of claim 22, wherein the closing mechanism includes a door that forces the cartridge against the heat generator and the interface panel.

24. (previously presented) The base unit of claim 23, wherein the latch engages a pin affixed to the actuator panel and progressively urges the door toward the cartridge, during the mechanical action of the latch. .

25. (previously presented) The base unit of claim 22, wherein the heat transfer surface is generally planar.

26. (previously presented) The base unit of claim 25, wherein the heat transfer surface is generally planar and aligned with the interface panel.

27. (previously presented) The base unit of claim 22, wherein the actuator panel and the heat transfer surface define a slot for receiving the cartridge.

28. (previously presented) A processing base unit that interfaces with a fluid-processing cartridge for extracorporeal blood processing, the base unit comprising:

a blood processing mechanism;

a heat exchange surface; and

a cartridge interface configured to interface with the fluid-processing cartridge so that when the fluid-processing cartridge is installed, the cartridge interface (a) actuates the fluid-processing cartridge such that the fluid-processing cartridge processes a fluid and (b) holds the fluid-processing cartridge in a position that keeps the heat exchange surface in thermal contact with the fluid,

a user-operable ~~an~~ engagement member movable relative to the cartridge interface;

wherein the cartridge interface and movement member are configured so that (a) portions of the cartridge interface that drive the fluid-processing cartridge and (b) portions of the cartridge interface that keeps the heat exchange surface in thermal contact with the fluid are both engaged movement of the engagement member.

29. (previously presented) The fluid processing base unit of claim 28, wherein the base unit further comprises a fastening system, and the single operator action comprises the step of engaging the fastening system.

30. (previously presented) The fluid processing base unit of claim 29, wherein fastening system comprises a lever, and the operator engages the fastening system by moving the lever.

31. (previously presented) The fluid processing base unit of claim 28, wherein the single operator action comprises the step of engaging a fastening system.

32. (previously presented) The fluid processing base unit of claim 28, wherein when the fluid-processing cartridge is installed, heat transfer from the heat exchange surface to the fluid is regulated.

33. (previously presented) The fluid processing base unit of claim 28, wherein the movement member clamps the cartridge against the cartridge interface and the heat exchange surface.

34. (new) A processing base unit that interfaces with a fluid-processing cartridge for extracorporeal blood processing, the base unit comprising:

a blood processing mechanism;

a heat exchange surface; and

a cartridge interface configured to engage the fluid-processing cartridge;

a second mechanism responsive to a user-operable control that engages the cartridge interface and heat exchange surface with the fluid processing cartridge in response to the user-operable control.